



Exhibit C

```
u/bmaison/bin/perl5
```

```
$rulefile=$ARGV[0];
```

```
$filein=$ARGV[1];
```

```
#"twov03_new4.data";
```

```
#$filein="twov114_new4.test";
```

```
$fileout=$ARGV[2];
```

```
open(f,$filein) || die "I can't";
```

```
$count=0;
```

```
$thresh_rules=1;
```

```
$print = 1;
```

```
$count=0;
```

```
while(<f>){
```

```
    chop;
```

```
    $sentence[$count]=$_;
```

```
    @a=split(/,/);
```

```
    $truth[$count]=$a[12];
```

```
    if ($#a > 12){
```

```
        $prediction[$count]=$a[$#a];
```

```
    }
```

```
    else{
```

```
        $prediction[$count]=1;
```

```
    }
```

```
    for ($i=0; $i<=$#a; $i++){
```

```
        $sent[$count][$i] = $a[$i];
```

```
    }
```

```
    $count++;
```

```
}
```

```
$no_sent=$count;
```

```
close(f);
```

```
print "HERE\n";
```

```
open(frules,$rulefile) || " I can't open $rulefile";
```

```
while(<frules>){
```

```
    chop;
```

```
    $good=0;
```

```

$bad=0;
$changed=0;

@a=split(/\s+/);
print "RULE $_ \t";
$rule = $_;
@b=split(/:/, $a[0]);
$source=$b[0];
$target=$b[1];

@d=split(/,/,$a[1]);
for ($i=0; $i<=$#d; $i++){
    @c=split(/:/,$d[$i]);
    $attribute[$i]=$c[0];
    $comparison[$i]=$c[1];
    $value[$i]=$c[2];
    #print $attribute[$i],"\t", $comparison[$i],"\t",$value[$i],
"\n";
}

for ($i=0; $i< $no_sent; $i++){
    if ($prediction[$i] eq $source){
        $count=0;
        for ($j=0; $j<=$#d; $j++){
            if ($comparison[$j] eq "eq"){
                if ($sent[$i][$attribute[$j]] ne $value[$j]){
                    last;
                }
            }
            else{
                $count++;
            }
        }
        elseif($comparison[$j] eq "ls"){
            if ($sent[$i][$attribute[$j]] > $value[$j]){
                last;
            }
            else{
                $count++;
            }
        }
        elseif($comparison[$j] eq "gt"){
            if ($sent[$i][$attribute[$j]] < $value[$j]){
                last;
            }
            else{
                $count++;
            }
        }
    }
}

```

```

        else{
            print "ERROR not such a comparison $comparison\n";
            exit;
        }
    }
    #print $i, "\t", $count, "\t", $#d+1, "\n";
    if ($count == $#d+1){
        $changed++;
        if ($prediction[$i] eq $truth[$i]){
            $bad++;
        }
        else{
            $good++;
        }
        $prediction[$i] = $target;
        #print "I changed $source to $target for $i\n";
    }
}

$diff=$good-$bad;
if ($diff > $maxdiff){
    $maxdiff=$diff;
    $bestrule = $rule;
}
print "  GOOD:$good  BAD:$bad  ALL:$diff\n";
}

$count_errors=0;
$count1_2=0;
$count2_1=0;

for ($i=0; $i< $no_sent; $i++){
    if ($prediction[$i] ne $truth[$i]){
        $count_errors++;
        if ($prediction[$i] eq "1" && $truth[$i] eq "2"){
            $count2_1++;
        }
        elsif($prediction[$i] eq "2" && $truth[$i] eq "1"){
            $count1_2++;
        }
    }
}

}

print "MAXDIFF $maxdiff  $bestrule\n";
print "ALL ERRORS  $count_errors\n";
print "TRUTH = 1 PREDICTION = 2 :  $count1_2\n";
print "TRUTH = 2 PREDICTION = 1 :  $count2_1\n";

```

```
if ($print){  
  open(fout,">$fileout");  
  for ($i=0; $i< $no_sent; $i++){  
    print fout $sentence[$i],",", $prediction[$i], "\n";  
  }  
}
```